

General

Title

Advanced chronic kidney disease (CKD): percent of patients prescribed with calcitriol, alfacalcidol, or vitamin D analogues.

Source(s)

Renal Physicians Association. Appropriate patient preparation for renal replacement therapy. Rockville (MD): Renal Physicians Association; 2002 Oct 1. 78 p. (Clinical Practice Guideline; no. 3).

Measure Domain

Primary Measure Domain

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

Secondary Measure Domain

Outcome

Brief Abstract

Description

This measure assesses the percent of patients prescribed calcitriol, alfacalcidol, or vitamin D analogues among patients with late chronic kidney disease (CKD) and immunoreactive parathyroid hormone (iPTH) greater than 100 pg/mL (or greater than 1.5 times the upper limit of normal) and has remained so after 3 months of recommended intervention.

Rationale

Renal osteodystrophy is a complex and multifacted disease process that begins early in the course of chronic kidney disease (CKD) and is a major, long-term complication associated with high rates of morbidity. The metabolic and skeletal derangements associated with renal osteodystrophy are not easily

reversed and, therefore, early interventions are crucial.

Reports to date have generally shown no change in renal function in association with calcitriol administrations as long as hypercalcemia is avoided. Low levels of 1,25(OH) vitamin D have been associated with a greater severity of secondary hyperparathyroidism (HPTH). Therapy can improve the histologic features of renal osteodystrophy, raise bone density, and may prevent bone fractures.

Primary Clinical Component

Advanced chronic kidney disease; renal osteodystrophy; refractory hyperparathyroidism; immunoreactive parathyroid hormone; calcitriol; alfacalcidol; vitamin D analogue

Denominator Description

The number of adult patients with advanced chronic kidney disease (CKD), not currently receiving renal replacement therapy, with immunoreactive parathyroid hormone (iPTH) greater than 100 pg/mL (or 1.5 times the upper limit of normal) and has remained so after 3 months (90 days) of recommended intervention

Numerator Description

The number of patients from the denominator prescribed calcitriol, alfacalcidol, or vitamin D analogues

Evidence Supporting the Measure

Evidence Supporting the Criterion of Quality

A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence

A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences

A systematic review of the clinical literature

Evidence Supporting Need for the Measure

Need for the Measure

Unspecified

State of Use of the Measure

State of Use

Pilot testing

Current Use

Internal quality improvement

Application of Measure in its Current Use

Care Setting

Ambulatory Care

Physician Group Practices/Clinics

Professionals Responsible for Health Care

Physicians

Lowest Level of Health Care Delivery Addressed

Individual Clinicians

Target Population Age

Age greater than or equal to 18 years

Target Population Gender

Either male or female

Stratification by Vulnerable Populations

Unspecified

Characteristics of the Primary Clinical Component

Incidence/Prevalence

Unspecified

Association with Vulnerable Populations

Unspecified

Burden of Illness

Low levels of 1,25(OH) vitamin D have been associated with a greater severity of secondary hyperparathyroidism (HPTH).

Evidence for Burden of Illness

Pitts TO, Piraino BH, Mitro R, Chen TC, Segre GV, Greenberg A, Puschett JB. Hyperparathyroidism and 1,25-dihydroxyvitamin D deficiency in mild, moderate, and severe renal failure. J Clin Endocrinol Metab. 1988 Nov;67(5):876-81. [PubMed](#)

Utilization

Unspecified

Costs

Unspecified

Institute of Medicine (IOM) Healthcare Quality Report Categories

IOM Care Need

Living with Illness

IOM Domain

Effectiveness

Data Collection for the Measure

Case Finding

Users of care only

Description of Case Finding

Adult patients 18 years and older with late chronic kidney disease (CKD) and immunoreactive parathyroid hormone (iPTH) greater than 100 pg/mL (or 1.5 times the upper limit of normal) and has remained so after three months after three months of recommended intervention

Denominator Inclusions/Exclusions

Inclusions

Adult patients age 18 years and older with chronic kidney disease stage 4 or 5 (glomerular filtration rate [GFR] less than or equal to 30 mL/min/1.73 m²), not currently receiving renal replacement therapy, with immunoreactive parathyroid hormone (iPTH) greater than 100 pg/mL (or 1.5 times the upper limit of normal) and has remained so after three months (90 days) of recommended intervention^{*}

^{*}Recommended intervention is vitamin D₂ 50,000 units orally every month for 6 months. This assumes that the serum calcium is less than 10.5 mg/dL and calcium X phosphorous is less than 55 mg²/dL².

Exclusions

Unspecified

Relationship of Denominator to Numerator

All cases in the denominator are equally eligible to appear in the numerator

Denominator (Index) Event

Clinical Condition

Therapeutic Intervention

Denominator Time Window

Time window precedes index event

Numerator Inclusions/Exclusions

Inclusions

The number of patients from the denominator prescribed calcitriol,^{*} alfacalcidol,^{**} or vitamin D analogues

^{*}Recommended dose of calcitriol is 0.25 mcg/day.

^{**}Recommended dose of alfacalcidol is 0.25 mcg/day up to a maximum of 0.5 mcg/day.

Exclusions

Unspecified

Measure Results Under Control of Health Care Professionals, Organizations and/or Policymakers

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

Numerator Time Window

Episode of care

Data Source

Administrative data

Laboratory data

Medical record

Pharmacy data

Level of Determination of Quality

Individual Case

Outcome Type

Clinical Outcome

Pre-existing Instrument Used

Unspecified

Computation of the Measure

Scoring

Rate

Interpretation of Score

Better quality is associated with a higher score

Allowance for Patient Factors

Unspecified

Standard of Comparison

Internal time comparison

Evaluation of Measure Properties

Extent of Measure Testing

Unspecified

Identifying Information

Original Title

Number of patients prescribed with calcitriol, alfacalcidol, or vitamin D analogues / number of patients with late CKD and iPTH greater than 100 pg/mL (or 1.5 times the upper limit of normal) and has remained so after 3 months recommended intervention.

Measure Collection Name

Renal Physicians Association Clinical Performance Measures on Appropriate Patient Preparation for Renal Replacement Therapy

Measure Set Name

Clinical Performance Measures for Bone Disease Recommendations

Submitter

Renal Physicians Association - Medical Specialty Society

Developer

Renal Physicians Association - Medical Specialty Society

Funding Source(s)

Ortho Biotech Products, LP

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Financial Disclosures/Other Potential Conflicts of Interest

There were none disclosed.

Adaptation

Measure was not adapted from another source.

Release Date

2002 Oct

Measure Status

This is the current release of the measure.

Source(s)

Renal Physicians Association. Appropriate patient preparation for renal replacement therapy. Rockville (MD): Renal Physicians Association; 2002 Oct 1. 78 p. (Clinical Practice Guideline; no. 3).

Measure Availability

The individual measure, "Number of patients prescribed with calcitriol, alfacalcidol, or vitamin D analogues / number of patients with late CKD and iPTH greater than 100 pg/mL (or 1.5 times the upper limit of normal) and has remained so after 3 months recommended intervention," is published in "Renal Physicians Association Clinical Practice Guideline #3: Appropriate Patient Preparation for Renal Replacement Therapy."

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NQMC Status

This NQMC summary was completed by ECRI on May 23, 2003. The information was verified by the Renal Physicians Association on June 17, 2003.

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